

# ИНФОРМАЦИОННО-МАТЕМАТИЧЕСКИЕ ТЕХНОЛОГИИ В ЭКОЛОГО-СОЦИО-ЭКОНОМИЧЕСКИХ СИСТЕМАХ

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## **USING DART LANGUAGE TO CREATE FIRST GIFT ORDERING APPLICATION IN IRAQ, WITH (AS-IS TO-BE) ANALYSIS**

### *Abstract:*

The use of smartphones and the areas in which smartphone solutions are provided have increased immensely over the past decade. However, one area which has not been as keen on adopting the smartphone approach is the Gifts area. This study aims to investigate the amenability of users to adapt to this approach and outlines the requirements and desires of such a product. By conducting extensive research in form of usability tests, interviews and observations, we developed a high-fidelity prototype based on an elaborate requirements specification. The results show that the users are, to a great extent, willing to use an application for Gifts-related tasks. Together with the prototype, the study provides support for further development of similar applications.

### *Keywords:*

Gifts application, As is, To be, Prototyping, Interaction Design, Usability Testing, User Experience (UX).

### *Introduction*

The needs of time saving solutions with ability to multitask have become a considerable aspect when creating mobile applications. People use their smart phones to make any sort of purchase over the Internet [1]. But, until recent time, the gifts market has not been as keen on adopting this approach.

Perhaps the most widely recognized issue with producing applications for portable devices is the significant degree of variety in the market [2]. Here, one of the objectives is to use information technology and introduce it to business management in an advanced manner [3,4].

The most important goals of the research are: Examine users' interests and needs in using mobile applications to shop for gifts, and implement a prototype for the application with a focus on affordability, intuition, and attractive design.

### *Research methodology*

Before creating the application, we used the electronic questionnaire, which is one of the methods that can be used to distribute the questionnaires [5,6,7].

Then As is - To be model and the prototype of the application were developed.

### Full process

After what we learned in the previous two sections about studying the analysis (As is To Be) on the part of the customer and from the side of the administration, now we will continue to develop a complete business plan and complete process in all aspects from the beginning of the customer's entry into the application of Erbil gifts and how the preparation and all possible details and possibilities for acceptance Or rejecting the application, until it is completely delivered with giving the invoice and receiving the money, as the customer, the administration, the gift maker and the delivery man will be in the process and explain what each of them does and how they are linked to each other during work (Figure 1).

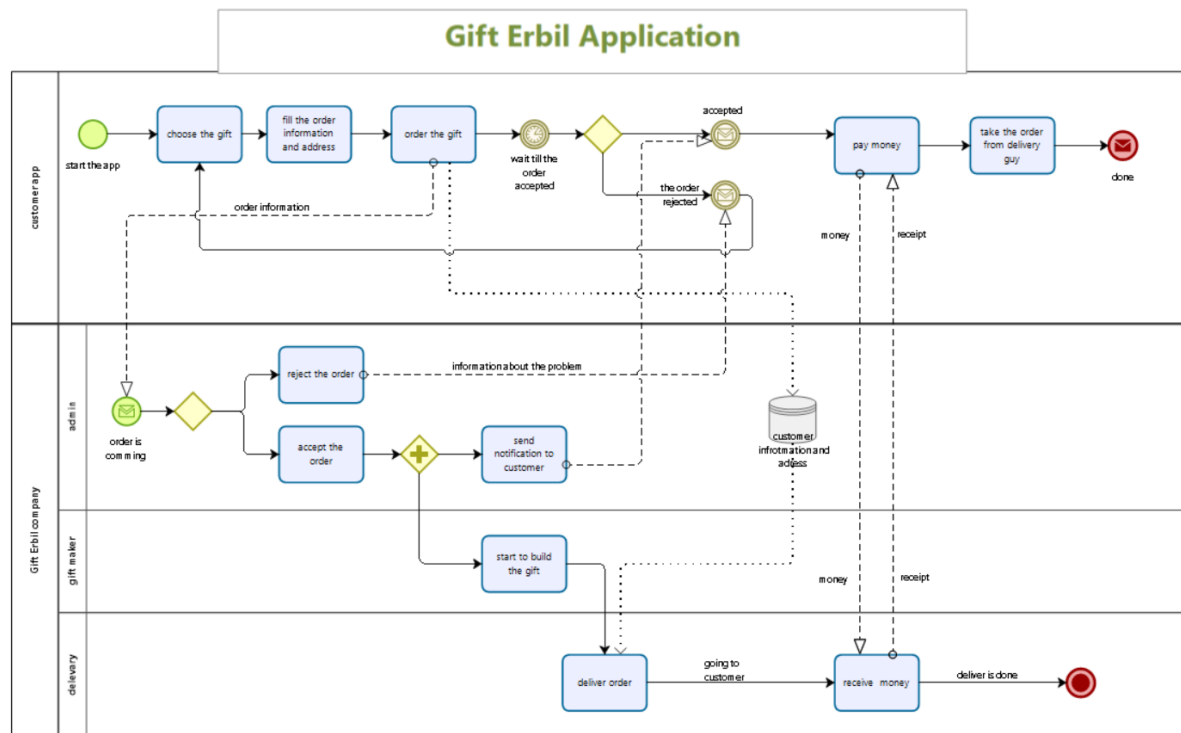


Figure 1 – To Be analysis for mobile application ordering- full process

### Questionnaire analysis

We created this dashboard to explain all what was mentioned in the survey that we have conducted on 230 people. This dashboard can be used in explanations and presentation for companies or when marketing the application. There must be information on which we base the application when the application was created. In the first row we put important information such as the number of people The participants in this questionnaire and the percentage of their acceptance of the idea of application and creation of (Gift Erbil application) and the percentage of their preference for new methods rather than the traditional methods through social media sites, where the acceptance rate was 90 percent and the real participants were 231 people of different ages between 18 years to 70 years and males Females and from different Iraqi cities, most of which were from Erbil, a city in northern Iraq and Baghdad, the capital of Iraq. In the second field, the two most important questions were discussed, which is the intensity of sending gifts in one year, and discussing the problems of delay that the customer faces when requesting the gift from social networking sites such as Facebook and Instagram, and how many The time required to complete the application process completely.

### Future work

In fact, this app is only the beginning and it is the first version of this app. It is also the first application in Iraq to order gifts, so it must be continuously developed and not satisfied with the first version. The errors that the user will face and the things that must be done must be addressed, but they are not available at the present time, so this study is a prototype for this application and we will mention in this section the main points that I plan to add in the future.

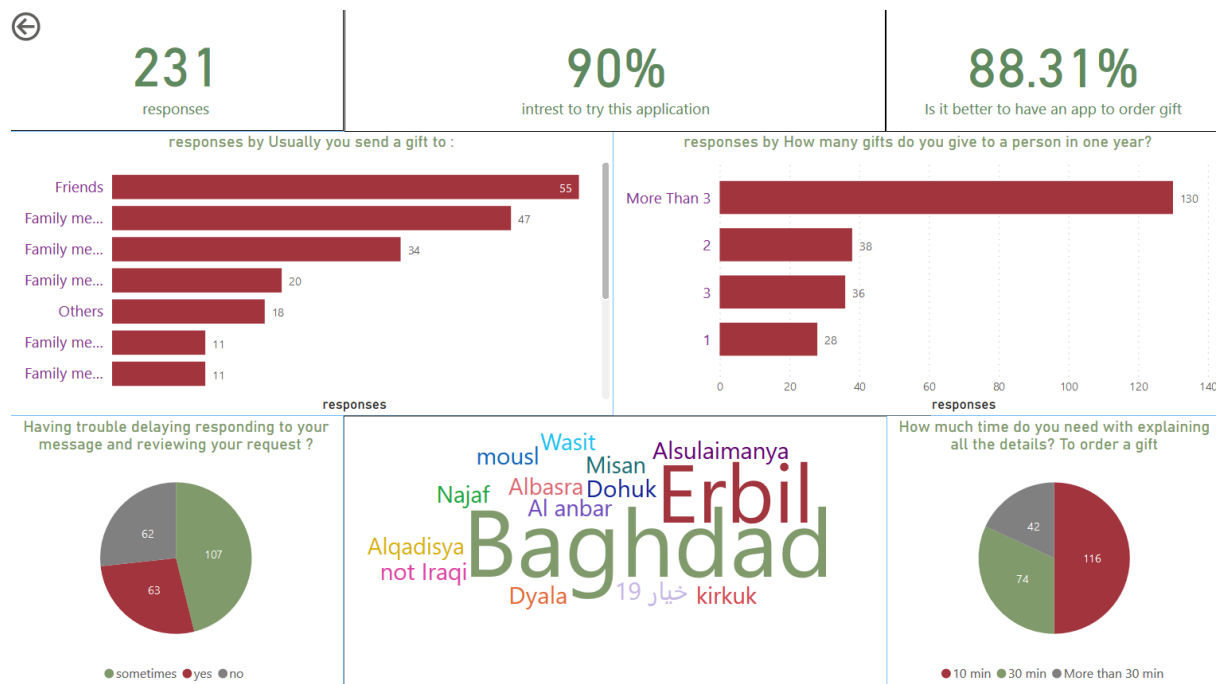


Figure 2 – Dashboard General Analysis of gift erbil

Table 1 – Several links for questionnaire of gift erbil application

|  |                            |
|--|----------------------------|
| The link of the Questionnaire in google form     | <a href="#">Click Here</a> |
| The link of Questionnaire in Google Sheet        | <a href="#">Click Here</a> |
| The link of the Dashboard ( Hand Drawing )       | <a href="#">Click Here</a> |
| The link of the Dashboard (Interactive Version ) | <a href="#">Click Here</a> |

Virtual simulation for making gifts in the beginning, we thought a lot about how to make the Erbil Gifts application different from the rest of the applications such as food ordering applications and what can be added to the application to be sophisticated and achieve new development on applications of this type, for this will be contracted with companies to add an innovative touch to the application of Erbil gifts, and we will explain what is included in this most important addition For application in this section A new window will be added under the name (Make your gift yourself) and this is a new method that enables the customer to choose his gift himself and arrange it according to what he desires in an easy and simple way and it will be applied to him according to what he wants. The box moves to the stage of choosing what to put inside this box (Figure 3).

### Discussion

The studies and evaluations conducted in the thesis are essentially generic and directly applicable to similar applications like restaurants and clothing apps. Results from the pre-study and usability testing in the different phases of prototyping can further benefit the development of design concepts. From the results of the pre-study, the users' interests and needs of the application could be defined. Throughout the whole process, the iterative approach let us continuously evolve the prototype according to the usability testing. This allowed us to assure that the requirements from the users as well as the customer were fulfilled as well as verify that the appropriate prototype was developed.

### Conclusion

The studies and evaluations conducted in the thesis are essentially generic and directly applicable to similar applications like restaurants and clothing apps. Results from the pre-study and usability testing in the different phases of prototyping can further benefit the development of design

concepts. From the results of the pre-study, the users' interests and needs of the application could be defined. Throughout the whole process, the iterative approach let us continuously evolve the prototype according to the usability testing. This allowed us to assure that the requirements from the users as well as the customer were fulfilled as well as verify that the appropriate prototype was developed. Through the results of the pre-study and usability testing, we could draw the conclusion that all users were in favour of using an application for ordering gifts. And through the questionnaire that was created, However, the common divider for all users was that it should be easy to use. Using pre-defined design principles, Also from the analysis of (As-Is To-Be), we conclude that this study allowed us to reduce the time required to request a gift through social networking sites through this application, which is the solution to all customers' problems that they face in the questionnaire. Design decisions such as placement of buttons, choice of colours, and general workflow allowed us to ultimately create a highly intuitive interface.

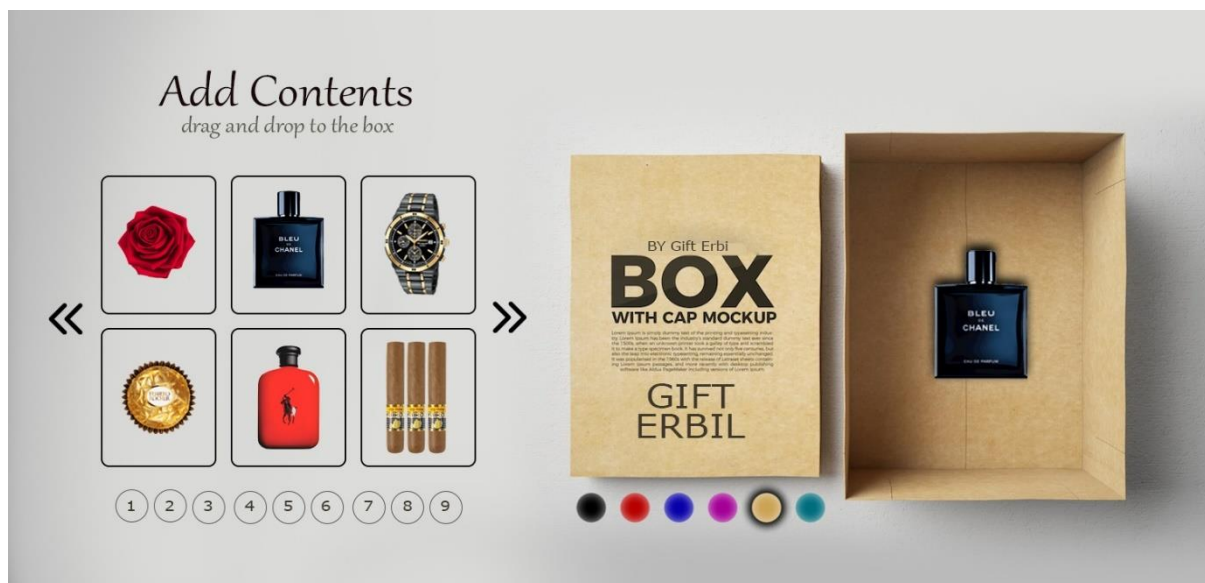


Figure 3 – A virtual page for the customer to make his own gift

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